

FIG. 1

REQUEST HISTORY BUFFER (RHB)

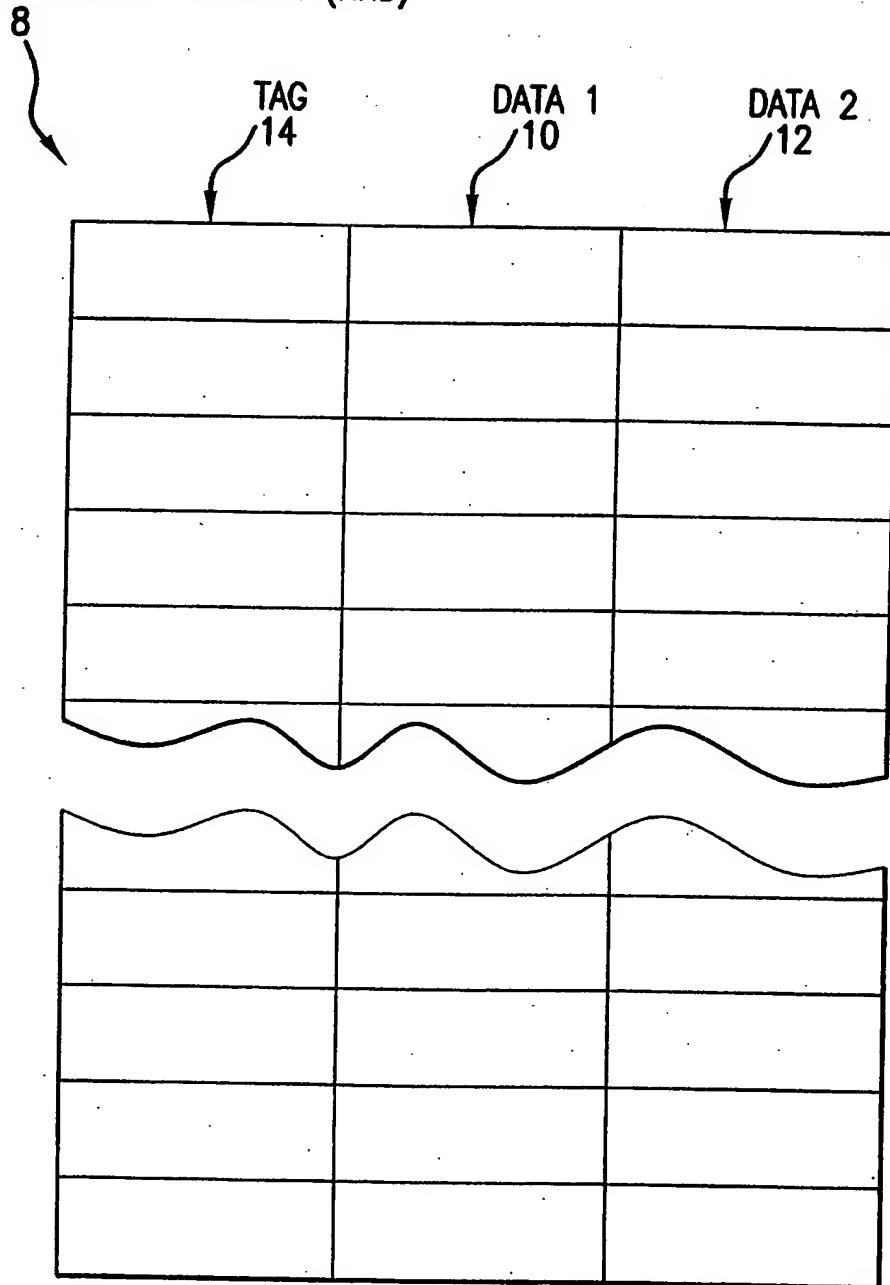
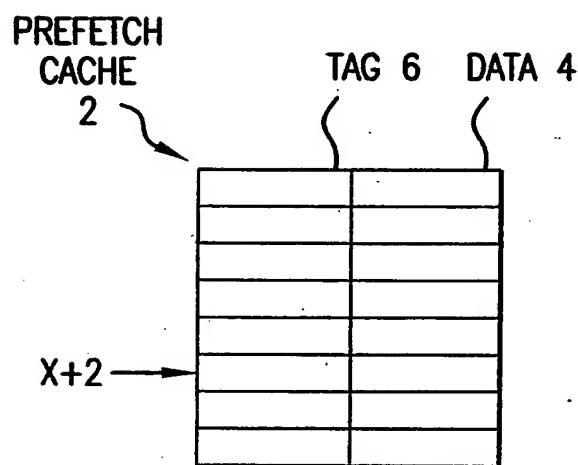
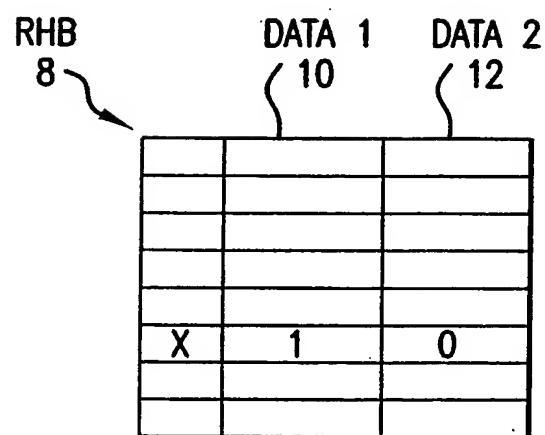


FIG.2



**FIG.3A**

A diagram showing a 6x3 grid of 18 cells. The grid is labeled with numbers 8, 10, and 12, each with a curved arrow pointing to a specific cell. The cell at row 4, column 1 is labeled 'X'. The cell at row 4, column 2 is labeled '1'. The cell at row 4, column 3 is labeled '1'. The other 15 cells are empty.

	X	1
	1	

A diagram showing a 6x2 grid of 12 cells. The grid is labeled with numbers 2 and  $X+3$ , each with a curved arrow pointing to a specific cell. The cell at row 6, column 1 is labeled  $X+2$ . The other 11 cells are empty.

	$X+2$

**FIG.3B**

8

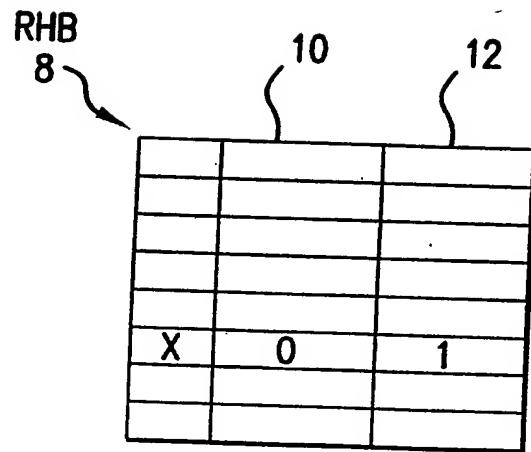
X	1	1
X+2	1	0

2

X+4 →

X+3	
X+2	

**FIG.3C**



PREFETCH  
CACHE

2

X+3

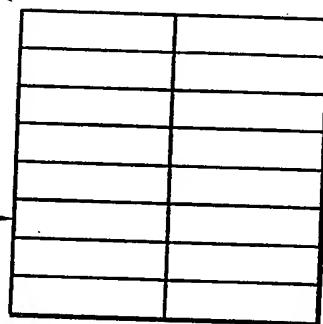


FIG.4A

Diagram of a 6x3 grid. The grid is labeled with the number 8 to its left. Above the grid, a bracket labeled 10 spans the first two columns, and another bracket labeled 12 spans all three columns. The grid contains the following data:

X	1	1

Diagram of a 6x2 grid. The grid is labeled with the number 2 to its left. Below the grid, an arrow labeled  $X+2$  points to the first column. The grid contains the following data:

	$X+3$

**FIG.4B**

8

10

12

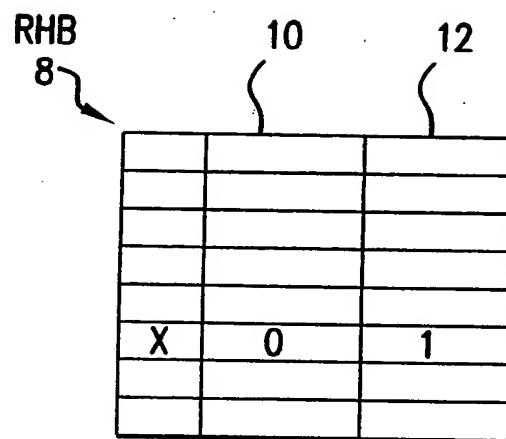
$X+2$	1	0
$X$	1	1

2

$X+4$  →

$X+3$	
$X+2$	

**FIG.4C**



PREFETCH  
CACHE

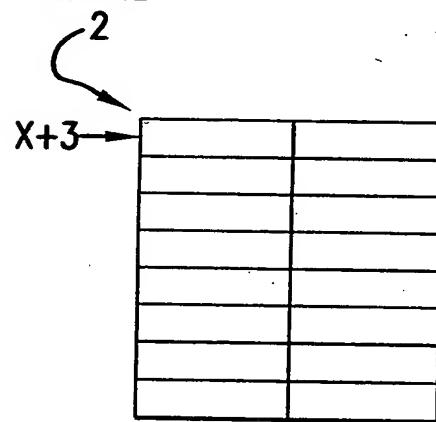


FIG.5A

A diagram showing a 4x3 grid of 12 empty cells. Above the grid, the number 8 is connected by a curved arrow to the top-left cell. The number 10 is connected by a curved arrow to the top-middle cell. The number 12 is connected by a curved arrow to the top-right cell. The grid is composed of 12 horizontal rows and 3 vertical columns.

X	1	1

A diagram showing a 4x2 grid of 8 empty cells. The number 2 is connected by a curved arrow to the top-left cell. The number  $x+2$  is connected by a horizontal arrow to the top-middle cell. The grid is composed of 8 horizontal rows and 2 vertical columns.

$x+3$	

**FIG.5B**

8

10

12

X	1	1
X-2	0	1

2

X-3

X+3	
X+2	

**FIG.5C**

8

10

12

X	1	1
X-2	1	1

2

X-4

X+3	
X+2	
X+3	

**FIG.5D**

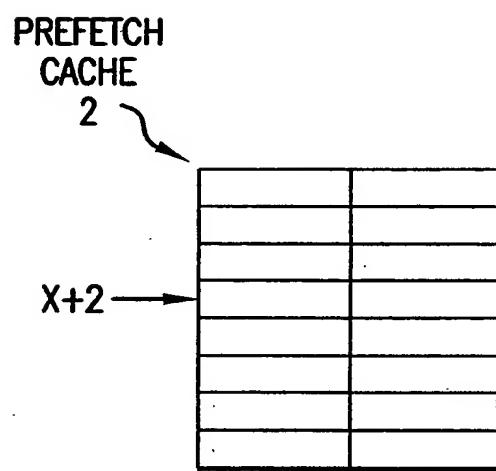
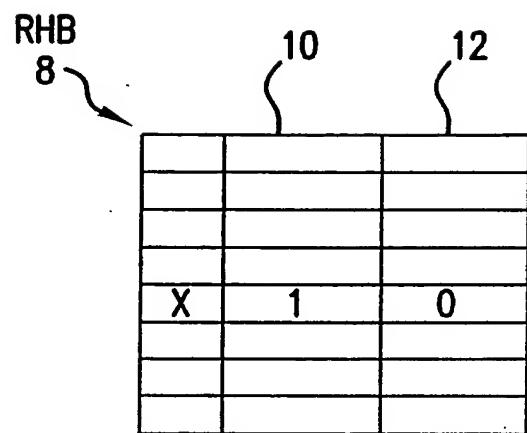


FIG.6A

8

X	1	1	

2

X+3

X+2	

FIG. 6B

8

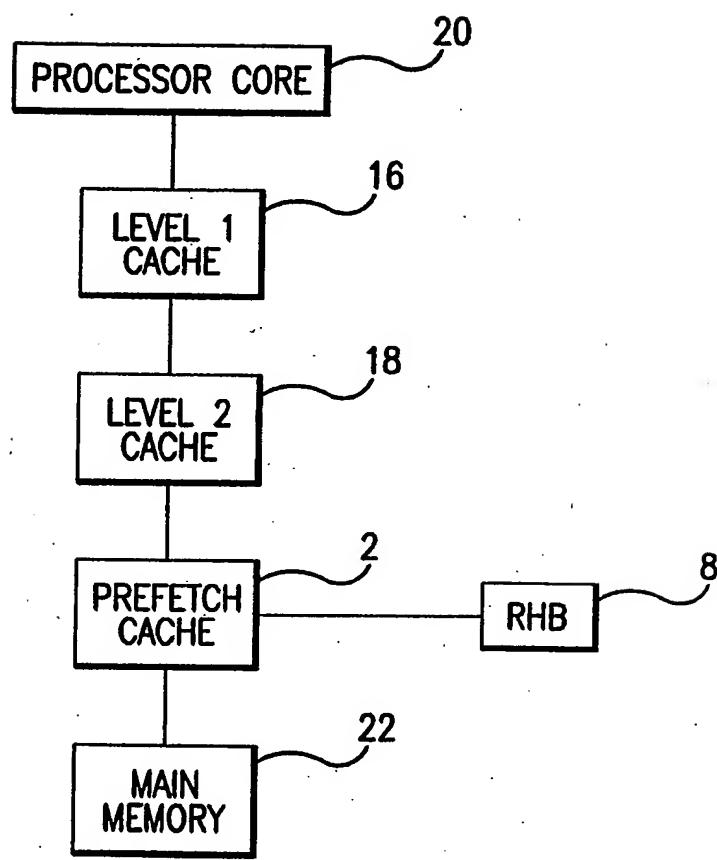
X	1	1
X-2	0	1

2

X+3	
X+2	

X-3

**FIG. 6C**



**FIG.7**